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09/640,701	08/17/2000	Joseph Smyth	673-1008	5290

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EXAMINER

ORTIZ, XIOMARA Y

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/640,701

Applicant(s)

SMYTH ET AL.

Examiner

Xiomara Y. Ortiz

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 39 recites the limitation "video codec" in reference to claim 39. However, the cited claim 32 does not recites a "video codec". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-6, 8-13, 20,22,24, and 32-35 are rejected under 35 U.S.C. 102(a) as being anticipated O'Neil U.S. Patent No. 6,404,745 B1.

Regarding claims 1 and 32, O'Neil et al. teaches a method, apparatus and program for centralized multipoint conferencing in a packet network. The method and program includes determining, according to a predetermined function, the degree to which a video signal from an endpoint is to be transmitted to endpoints within the conference and dynamically controlling the video output from said endpoint as a result of said determination, see col. 3 lines 34-52, where O'Neil teaches a selection process based on the voice levels, to determine the principal video broadcaster or the selected video sources of the composite image to be broadcast to all the endpoints and col.6 lines 35-36, where O'Neil discloses a program to process audio, video and data packets.

Regarding claim 2, O'Neil complies with all the limitations in claim 1, and also disclose the video conference forms part of a multimedia conference, said multimedia conference further including an audio conference between said plurality of endpoints, see col. 1 lines 47-52.

Regarding claims 3 and 33, O'Neil comprises all the limitations in claim 2, and also disclose that the determination of the degree to which said video signal is to be transmitted to endpoints within the conference comprises analyzing audio signals from the endpoints, see col.3 34-52, wherein the selection process is based upon the comparison of voice levels of the conference endpoints.

Regarding claims 4 and 34, O'Neil complies with all the limitations in claim 3, and also discloses that an analysis of audio signals comprises applying an audio mixing algorithm to said audio signals, and using a result of said algorithm to determine the degree to which said video

signal is to be transmitted to endpoints within the conference, see col. 3 lines 48-52 and 55-61, wherein a mix of audio sources selected using a comparison of voice levels implicitly involve programming of some type of algorithm.

Regarding claim 5, O'Neil complies with all the limitations in claim 4, and also disclose that the resulting audio signals are from only a subset of said plurality of endpoints being transmitted to the plurality of endpoints, see col. 4 lines 10-15.

Regarding claim 6, O'Neil complies with all the limitations in claim 5, and also disclose a video signals from only said subset of endpoints are transmitted to said plurality of endpoints, see col. 4 lines 10-15.

Regarding claim 8, O'Neil complies with all the limitations in claim 4, and also disclose applying the method to more than one endpoint of the plurality of endpoints, see col. 3 lines 28-42, wherein the comparison of voice levels is between the conference endpoints.

Regarding claim 9, O'Neil complies with all the limitations in claim 8, and also disclose applying the method to all of the endpoint of the conference, see col. 3 lines 48-52, wherein the comparison of voice levels is between the conference endpoints.

Regarding claim 10, the O'Neil complies with all the limitations in claim 1, and also discloses terminating the video output from an endpoint terminating the video output from the endpoint when the video signal is not being transmitted to the other endpoints in the conference, see col.3 lines 39-42, wherein the loudest conference endpoint is the principal video broadcaster while speaking, implies terminating the video output of the other endpoints if is not the loudest speaker that is the one that is being transmitted or viewed.

Regarding claim 11, O'Neil complies with all the limitations in claim 10, wherein the loudest conference endpoint is the principal video broadcaster while speaking also implies recommencing the video output from an endpoint if is the loudest person speaking, in order to be the one transmitted to the other endpoints, see page col.3 lines 39-42.

Regarding claims 12 and 13, O'Neil complies with all the limitations in claim 10, and also disclose that all the other endpoints see the principal broadcaster while speaking see col.3 lines 42-46.

Regarding claim 20, O'Neil discloses a multimedia conference with a plurality of endpoints communication over a packet-based data network, that applies an audio mixing algorithm to the audio signals to determine the degree to which the video signals id going to be transmitted and dynamically varying the video output from one or more endpoints as a result from the determination, see col.1 lines 19-25 for multimedia and multiple endpoints, col.1 line 40 for packet-based networks, col. 4 lines10-15 for audio mixing, col. 3 lines 48-54 for using levels of voice to determine which signals are to be transmitted and video output.

Regarding claim 22, the O'Neil discloses that the variation in video output occurs instantaneously as the algorithm varies over time, see col.3 lines 38-43 wherein upon a comparison of voice level, the loudest conference endpoint is designated the principal video broadcaster and is viewed by all the other endpoints.

Regarding claim 24, O'Neil et al. teaches a method and apparatus for centralized multipoint conferencing in a packet network. The method includes a Multipoint Control Unit (MCU) that links multiple endpoints together, see col.1 lines 18-19, in which the MCU selecting the audio signals from a subset of said endpoints and generating therefrom at least one broadcast audio

Art Unit: 2141

signal for transmission to the plurality of endpoints and selecting the video signals from said subset of endpoints and generating therefrom at least one broadcast video signal for transmission to the plurality of endpoints, see col.4 lines 10-25. The method also includes, dynamically controlling the video output from each of the plurality of endpoints, see col. 3 lines 38-45, where using a selection process based upon the comparison of the voice levels of the conference endpoints, the loudest conference endpoint is designated the principal video broadcaster while speaking been viewed by all the other endpoints, while as the principal video broadcaster, been able to view the previous principal video broadcaster.

Regarding claim 35, O'Neil complies with all the limitations in claim 32, and also discloses a computer program wherein the control signals are effective to stop or start transmission of the video output from said endpoint, see col.3 lines 48-54, wherein the sources for the composite image are selected upon a comparison of voice levels of the conference endpoints means stop or start the transmission of video output from an endpoint depending on the voice level.

6. Claims 25-29 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Yan et al. U.S Patent No. 5,623,312.

Regarding claim 25, Yan et al. teaches a Multipoint Control Unit (MCU) containing a plurality of audio and video ports for connecting endpoints to the MCU via a data network over audio and video channels, an audio processing unit for receiving audio signals and generate a audio broadcast signal for transmission to the endpoints, a video processing unit for receiving video signals and generate a video broadcast signal for transmission to the endpoints, a control

unit for generating control signals to control the video outputs from the endpoints to generate a broadcast video signal, (see fig. 5), and a memory unit, see col.15 lines 64-67.

Regarding claim 26, Yan complies with all the limitations in claim 25, and also complies with MCU comprising of signaling ports connecting the endpoints to the control unit via a data network over signaling channels, see fig. 5.

Regarding claim 27, Yan complies with all the limitations in claim 25, and also complies with one or more control channel ports for connecting the endpoints to the MCU over signaling channels, see fig.5.

Regarding claim 28, Yan et al. discloses a multimedia conferencing system comprising a plurality of audio and video ports for connecting endpoints to the MCU via a data network over audio and video channels, an audio processing unit for receiving audio signals and generate a audio broadcast signal for transmission to the endpoints, a video processing unit for receiving video signals and generate a video broadcast signal for transmission to the endpoints, a control unit for generating control signals to control the video outputs from the endpoints to generate a broadcast video signal, a plurality of signaling ports, for connecting said endpoints to the MCU via the data network over a signaling channel, (see fig. 5), and a memory unit, see col.15 lines 64-67.

Regarding claim 29, Yan complies with all the limitations in claim 28, and also comprises a data network for carrying said audio, video and control signals, and a plurality of endpoints connected to said MCU via the data network, see fig. 5.

Regarding claim 31, Yan complies with all the limitations in claim 29, and also discloses a plurality of endpoints, see fig. 5, wherein the endpoints are well known logical entities and inherently have a way of identification (e.g. IP address).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil U.S. Patent No. 6,404,745 B1 in view of Shaffer et al. European Patent EP 1077565 A1.

O'Neil discloses a method for controlling video signals in a conference involving a plurality of endpoints that complies with all the limitations in claim 5, but fails to disclose that the video signal of the subset of endpoints has higher quality video images than the video signals from the other endpoints outside the subset. However, Shaffer teaches that an MCU can be configured to designate a particular user as a primary and all others as secondary and in an example of a teacher/lecture environment, it is desirable that the teacher to have the highest quality codec when speaking and the students the lowest quality one when questioning, see col.6 lines 51-54. Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by O'Neil and

Art Unit: 2141

combining it with the invention disclosed by Shaffer such that the endpoints of the subset to have the higher quality video image than the other endpoints outside the subset. One of ordinary skill in the art would have been motivated to do this combination in order to preserve the system bandwidth, see Shaffer col. 6 line 58 and col.7 line 1.

9. Claims 14-19,21,36,37,38,40, and 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil U.S. Patent No. 6,404,745 B1 in view of the MCU-323 Multipoint Conferencing Unit user guide.

Regarding claim 14 O'Neil discloses all the limitations in claim 1, but fail to disclose providing a lower bandwidth video output from the endpoints when the endpoints are transmitting to other endpoints with a reduced image quality. However, the MCU-323 Multipoint Conferencing Unit user guide teaches a Dynamic Bandwidth service, in where the MCU-323 adapts the bandwidth to the videoconferencing terminal with the lowest bandwidth capacity, see 1-9 lines 12-14 in bandwidth considerations. Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by O'Neil and combining it with the invention disclosed in the Multipoint Conferencing Unit user guide. The results of this combination would lead to have a dynamic bandwidth in order to prevent video conferencing terminals (endpoints) that support lower video bit and frame rates from receiving unsuitable quality video, see page1-9 lines 10-12. It is well known in the art that reducing the quality reduces the bandwidth.

Regarding claims 15, 16, and 17, these are rejected under the same rationale since these constitute specific examples of factors that would affect bandwidth in video communication.

The MCU-323 Multipoint Conferencing Unit user guide also teaches that the conference is carried out on a packet-based data network, see page 1-1 line 11 where it says that the MCU-323 is fully H.323 compliant wherein H.323 is an ITU standard for videoconferencing over packet switched network such as LANs and the internet, see the glossary page 3.

Regarding claim 18 and 19, the above combination complies with all the limitations in claim 14, and also disclose that the method to control the video output is to be applied to all the endpoints, see page 1-9 lines 1-4 and 12-14 bandwidth consideration.

Regarding claim 21, O'Neil discloses all the limitations in claim 20 and also disclose varying the video output by ceasing and commencing video output from endpoints, which is part of a selection process for determining which endpoints are going to be viewed, by the voice levels, see col.3 lines 39-42, but fails to disclose varying the video output by increasing or decreasing the bandwidth of the video output. However, the MCU-323 Multipoint Conferencing Unit user guide teaches a dynamic bandwidth, see page 1-9. Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by O'Neil and combining it with the invention disclosed in the MCU-323 Multipoint Conferencing Unit user guide in order to prevent videoconferencing terminals (endpoints) from receiving unsuitable quality video, see page 1-9 lines 10-11.

Regarding claims 36 and 37, O'Neil discloses all the limitations in claim 32, but fail to disclose that the control signal are effective to increase or decrease the bandwidth of the video output and the frame rate. However, the MCU-323 Multipoint Conferencing Unit user guide teaches a Dynamic Bandwidth service, in where the MCU-323 supports varying bandwidth and frame rates, see page 1-9 lines 10-16 in bandwidth considerations. Therefore at the time the

Art Unit: 2141

invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by O'Neil and combining it with the invention disclosed in the Multipoint Conferencing Unit user guide. The results of this combination would lead to support varying bandwidth and frame rates to prevent video conferencing terminals (endpoints) that support lower video bit and frame rates from receiving unsuitable quality video, see page 1-9 lines 10-12.

In consideration of claim 38, the combination above does not explicitly disclose a computer program product that produces a control signal that increases or reduces the image resolution of the video output from an endpoint. Nonetheless, the cited prior art does teach a conferencing unit and implicitly a program that has a dynamic bandwidth service, in where the MCU-323 Multipoint Conferencing Unit adapts the bandwidth to the videoconferencing terminal with the lowest bandwidth capacity, see MCU-323 Multipoint Conferencing Unit user guide 1-9 lines 12-14 in bandwidth considerations. Therefore, it would have been obvious to one of ordinary skill in the art, since the combination teaches a dynamic bandwidth, to be reduced by reducing the resolution due to that is well known in the art that reducing the resolution reduces the bandwidth.

In consideration of claim 40 O'Neil discloses all the limitations in claim 32, but fail to disclose a computer program to observe a hysteresis delay. However, the MCU-323 Multipoint Conferencing Unit user guide teaches an adjustable minimum time interval for voice activation see page 1-9 lines 2-4. Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by O'Neil and combining it with the invention disclosed in the Multipoint Conferencing Unit user

guide. The results of this combination would lead to have a minimum time interval before video images are switch, it is well known to have this feature to not switch the video image displayed to someone who coughs briefly.

Regarding claim 41, the combination above complies with all the limitations in claim 40, and also discloses a computer program that prevent the computer from issuing different control signal to an endpoint, see page 1-3 lines 3-4 voice-activated video switching having a adjustable minimum time interval for voice activation.

10. Claims 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil U.S.

Patent No. 6,404,745 B1 in view of Maeng et al. U.S. Patent No. 5,991,277.

Regarding claim 23, O'Neil discloses all the limitations in claim 20, but fails to disclose that the variation in the video output is subject to a hysteresis delay to compensate for short-lived variations. However, Maeng teaches a cough delay, see col. 2 lines 17-18. Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by O'Neil and combining it with the invention disclosed by Maeng in order to "prevent a short duration audio signal above a certain threshold from switching the primary transmission site from the site of the speaker to the site of short duration audio signal", see col.2 lines 13-18.

11. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yan et al. U.S. Patent No. 5623312 in view of Sengodan U.S. Patent No. 6,490,275.

Yan discloses a multimedia conferencing system that complies with all the limitations in claim 29, but fails to disclose that the network is a packet-based data network. However Sengodan discloses the use of H.323 standards for packet-based network instead of using H.320 for ISDN network. Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by Yan and combining it with the invention disclosed by Sengodan such that the network, to which the MCU is couple to the end points, to be a packet-based data network using H.323 standards. One of ordinary skill in the art would have been motivated to do this combination in order to make the system more affordable because is still expensive to use ISDN and using H.323 allows user to communicate without concern for compatibility, see Sengodan col.1 lines 22-42.

12. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil U.S. Patent No. 6,404,745 B1 in view of Chau et al. U.S. Patent No. 5,550,906.

Regarding claim 42, O'Neil discloses all the limitations in claim 32 but fails to disclose a computer program to maintain a data structure that contain the current status of the video output from the endpoints to be recorded. However, Chau et al. teaches a status data base that contains information of the endpoint such as extension number, name of the user, status of the endpoint, etc, see col.6 lines 8-17. Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by the MCU-323 Multipoint Conferencing Unit user guide and combining it with the invention

Art Unit: 2141


disclosed by Chau in order to maintain a call record for all presently existing calls, see col.6 line 33-34.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. U.S. Pat. No. 6,404,745 B1 to O'Neil, which discloses method and apparatus for centralized multipoint conferencing in a packet network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiomara Y. Ortiz whose telephone number is (703) 305-6783. The examiner can normally be reached on Monday-Thursday from 8:30AM to 5:30PM. The examiner can also be reached on alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER

Xiomara Y. Ortiz
Patent Examiner
Art Unit 2141